Amendments

1. (original) A method, comprising:
encoding a public key in one or more ink strands;
embedding the one or more ink strands in a printing material; and
wherein the public key is uniquely associated with an electronic signature that is unique to a user.

2. (original) The method as recited in claim 1, further comprising deriving the public key from information associated with the user.

3. (original) The method as recited in claim 1, wherein the printing material further comprises ink.

4. (original) The method as recited in claim 1, further comprising:
assigning a private key to the user; and
deriving the public key using the private key.

5. (original) The method as recited in claim 1, further comprising:
receiving a password from the user; and
deriving the public key using the password.

6. (original) The method as recited in claim 1, further comprising placing the printing material including the ink strands into a writing instrument.

7. (original) The method as recited in claim 1, further comprising placing the printing material including the ink into a replaceable cartridge for a writing instrument.

8. (original) The method as recited in claim 1, further comprising distributing the printing material including the ink strands to the user.

9. (original) The method as recited in claim 1, wherein the ink strands further comprise microscopic particles that contain public key data.

10. (original) The method as recited in claim 1, wherein the ink strands further comprise deoxyribonucleic acid (DNA) strands that are arranged in such a way as to denote the public key.

11. (currently amended) One or more computer-readable media containing computer-executable instructions that, when executed on a computer, perform the following steps:

receiving an electronic document that has been converted from a paper document having a physical signature;

detecting one or more ink strands in ink used to create the physical signature, a public key being encoded in the one or more ink strands;

identifying a the public key encoded in ~~denoted by~~ one or more of the one or more ink strands;

locating an electronic signature uniquely associated with the public key; and

attaching the electronic signature to the electronic document to create an electronically signed electronic document.

12. (original) The one or more computer-readable media as recited in claim 11, wherein the identifying a public key further comprises reading a public key from one or more of the one or more ink strands, the public key being stored on each of the one or more ink strands.

13. (original) The one or more computer-readable media as recited in claim 11, wherein the identifying a public key further comprises determining the public key from a coded arrangement of a plurality of the one or more ink strands.

14. (original) The one or more computer-readable media as recited in claim 11, wherein the identifying a public key further comprises determining the public key from a unique arrangement of deoxyribonucleic acid (DNA) strands that are included in the one or more ink strands.

15. (currently amended) The one or more computer-readable media as recited in claim 11, wherein the locating an electronic signature further comprises:

accessing an electronic signature database that contains a plurality of electronic signatures and a plurality of public keys, each electronic signature being uniquely associated with one or the plurality of public keys;

finding a public key in the electronic signature database that matches the public key identified by the ink strands; and

if the public key identified in the ink strands ~~if~~ is found in the electronic signature database, locating the electronic signature that is uniquely associated with the public key found in the electronic signature database.

16. (original) The one or more computer-readable media as recited in claim 15, further comprising retrieving the located electronic signature from the electronic signature database.

17. (original) A method for converting a physical signature to an electronic signature, comprising:

identifying a public key ~~from~~ encoded in one or more ink strands contained in ink in which the physical signature was created;

locating the public key in an electronic signature database;

identifying an electronic signature in the electronic signature database that is uniquely associated with the public key; and

substituting the electronic signature in place of the physical signature.

18. (original) The method as recited in claim 17, wherein the identifying a public key further comprises reading the public key from one or more of the one or more ink strands.

19. (original) The method as recited in claim 17, wherein the identifying a public key further comprises decoding a public key from a specific arrangement of a plurality of the one or more ink strands.

20. (original) The method as recited in claim 17, wherein the locating further comprises accessing an electronic signature authority to access the electronic signature database.

21. (original) The method as recited in claim 17, wherein the substituting further comprises attaching the electronic signature to an electronic document that is an electronic version of a paper document to which the physical signature was affixed.

22-28 (cancelled)